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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,677	06/21/2006	Ulrich Karl	13156-00050-US1	9328
30678 7590 01/24/2012 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006			EXAMINER SULLIVAN, DANIELLE D	
			ART UNIT	PAPER NUMBER
			1617	
			MAIL DATE	DELIVERY MODE
			01/24/2012	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,677	<b>Applicant(s)</b> KARL ET AL.	
	<b>Examiner</b> DANIELLE SULLIVAN	<b>Art Unit</b> 1617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/09/2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 34-73 is/are pending in the application.
- 4a) Of the above claim(s) 34-36,39-62,66 and 70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37,38,63-65,67-69 and 71-73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-946)   | Paper No(s)/Mail Date: _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/09/2011</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicant's amendment filed 11/09/2011 has been entered. Claims 34-73 are pending. Claims 34-36, 39-62, 66 and 70 are withdrawn. Claims 37, 38, 65, 67 and 72 were amended. Claims 37, 38, 63-65, 67-69 and 71-73 are under examination.

#### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

The information disclosure statement filed 11/09/2011 has been considered.

#### ***Specification***

The embedded hyperlink and/or other form of browser-executable code located on page 11, line 34 has been deleted.

#### ***Obviated Claim Objections***

Claim 38 was objected to because of the following informalities: "nitril" should be spelled "nitrile". Appropriate correction has been made.

#### ***Withdrawn Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 65 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement Applicants amendment to specify the abbreviation has overcome the rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37, 38, 63-65, 67-69 and 71-73 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The amendment removing the term preferably has overcome the rejection.

### ***Maintained Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 37, 38, 63-65, 67-69 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marrs et al. (EP0382382; effective date January 26, 1990) in view of Gordon et al. (US 3,713,868; effective date January 30, 1973).

Applicant claims a composition comprising:

- a) a least one insecticide and/or repellent as component A, cypermethrin and
- b) at least one acrylic binder as component B1, wherein component B1 is obtainable by emulsion polymerization of the following components:
  - b1a) 81.0 % by weight of n-butylacrylate as component B1A;
  - b1c) 2.0 % by weight of N-methylol methacrylamide as component B1C;
  - b1d) 1.0 % by weight of acrylic acid as component B1D;

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and b1e1) 16 % by weight of acrylic nitrile as component B1E1.

Applicant also claims impregnated textile, polyester, comprising the composition.

Marrs et al. teach the treatment of fabrics with insecticides and compositions used in the treatment of fabrics by impregnation utilizing pyrethroids selected from cypermethrin which are stable and can be formulated as emulsion concentrates (page 2, lines 1-7). Fabrics treated include synthetic polyester fibers (page 2, lines 29 and 30). The compositions comprise a polymeric substance which may be made synthetically by copolymers acrylonitrile (acrylic nitrile) and acrylate polymers (page 2, lines 40-45). The composition comprises 1-70% of the insecticide and 1-25% of the polymeric substance (page 3, lines 22-26).

Marrs et al. fail to teach the specific polymer combination B1. It is for this reason that Gordon et al. is joined.

Gordon et al. teach acrylic foam-coated fabric which is breathable, opaque, has excellent insulation properties and resistance to water and dry-cleaning solvents but which is flexible and has good hand and drape properties (abstract). The acrylic foam is obtained from 50-100% acrylate monomer, 5-20% nitrile monomer, 0.5-5% unsaturated carboxylic monomer and 0.5-5% amide (Table 10). Acrylates include butyl acrylate, nitriles include acrylonitrile, carboxylic monomer include acrylic acid and amides include methylolacrylamide (column 3, lines 36-50). Example 2 discloses an example comprising 50% butyl acrylate, 10% acrylonitrile, 1.5% acrylic acid and 2% methylolacrylamide. Example 3 discloses an example comprising 60% butyl acrylate,

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15% acrylonitrile, 2% acrylic acid and 1% methylolacrylamide. It would have been routine optimization to adjust the amounts to formulate polymer B1, wherein b1a) is 81.0 % by weight of n-butylacrylate, b1c) is 2.0 % by weight of N-methylol methacrylamide, b1d) is 1.0 % by weight of acrylic acid and b1e1) is 16 % by weight of acrylic nitrile because Gordon et al. teach the foam is obtained by from 50-100% acrylate monomer (n-butylacrylate), 5-20% nitrile monomer (acrylic nitrile), 0.5-5% unsaturated carboxylic monomer (acrylic acid) and 0.5-5% amide (N-methylol methacrylamide).

Both Marrs et al. and Gordon et al. teach compositions for the treatment of fabrics. It would have been prima facie obvious at the time of the instant invention to combine the teachings of Marrs et al. and Gordon et al. to formulate a composition comprising cypermethrin and the polymer B1 with a reasonable expectation of success. One of ordinary skill in the art would have been motivated to combine cypermethrin with polymer B1 because Marrs et al. teach polymers are incorporated in polyester nets with cypermethrin were known at the time of invention and Gordon et al. teaches polymers encompassing B1 impart beneficial properties to fabric including breathability, opaqueness, insulation and resistance to water and dry-cleaning solvents while being flexible with excellent drape properties.

### ***Response to Arguments***

Applicant's arguments filed 11/09/2011 have been fully considered but they are not persuasive. Applicant argues that since Marrs suggests polymers which are not structurally related to the specific acrylic binder claimed, there is not starting point for combining this document with Gordon. The Examiner is not persuaded by this

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argument. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, both Marrs and Gordon are drawn to the same field of endeavor.

Applicant further argues that there are no credible arguments of how someone of average skill in the art would have selected Gordon without the hindsight of the invention. The Examiner is not persuaded by this argument. The art is weighed in view of what would have been known to one of ordinary skill in the art, not average skill in the art. Furthermore, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Further, Applicant argues that Gordon was already 20 years old when Marrs was looking for suitable polymers, yet Marrs did not come up with the polymers of Gordon. The Examiner is not persuaded by this argument because contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977). Applicant lacks any sound evidence of this fact.



Finally, Applicant argues that there was no reasonable expectation that Marrs and Gordon would result in higher mortality rates as high as 100% even after 20 washings since Marrs at best achieves mortality rates at best 68.8% after only 2 washings at best. The Examiner is not persuaded by this because the evidence is not in the form of a side-by-side comparison in a single document utilizing the same steps of manufacture, lab conditions, etc. Therefore, unexpected results have not clearly been demonstrated.

Claims 37, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marrs et al. (EP0382382; effective date January 26, 1990) in view of Gordon et al. (US 3,713,868; effective date January 30, 1973) as applied to claims 37, 38, 63-65, 67-69, 71 and 72 above in further view of Shober et al. (US 6,2147,365; effective date April 10, 2001).

Applicant claims a composition comprising:

- a) a least one insecticide and/or repellent as component A, cypermethrin and
- b) at least one acrylic binder as component B1, wherein component B1 is obtainable by emulsion polymerization of the following components:
  - b1a) 81.0 % by weight of n-butylacrylate as component B1A;
  - b1c) 2.0 % by weight of N-methylol methacrylamide as component B1C;
  - b1d) 1.0 % by weight of acrylic acid as component BID;

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and b1e1) 16 % by weight of acrylic nitrile as component B1E1 where the netting is made of polyethylene terephthalate.

The teachings of Marr et al. and Gordon et al. are addressed in the above 103 rejection, but fail to teach the netting is made of polyethylene terephthalate. It is for this reason Shober et al. is joined.

Shober et al. teach methods of controlling mites by the use of pyrethroid impregnated netting (column 2, lines 40-56). The netting is made of suitable fibers including polyester (column 3, lines 20-25). Polyethylene terephthalate netting is specified as preferred fibers treated (claim 5).

Shober et al., Marrs et al. and Gordon et al. teach compositions for the treatment of fabrics. It would have been prima facie obvious at the time of the instant invention to combine the teachings of Shober et al., Marrs et al. and Gordon et al. to apply the composition on netting made of polyethylene terephthalate with a reasonable expectation of success. One of ordinary skill in the art would have been suggested to treat netting made of polyethylene terephthalate because Shober et al. teach polyethylene terephthalate fibres are preferred.

### ***Response to Arguments***

Applicant's arguments filed 11/09/2011 have been fully considered but they are not persuasive. Applicant argues that Shober does not cure the deficiencies of Marrs and Gordon discussed above. The Examiner maintained the position taken in the above response.

Claims 37 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marrs et al. (EP0382382; effective date January 26, 1990) in view of Gordon et al. (US 3,713,868; effective date January 30, 1973) as applied to claims 37, 38, 63-65, 67-69, 71 and 72 above in further view of Laas et al. (US 6,777,523; effective date August 17, 2004).

Applicant claims a composition comprising:

- a) a least one insecticide and/or repellent as component A, cypermethrin and
- b) at least one acrylic binder as component B1, wherein component B1 is obtainable by emulsion polymerization of the following components:
  - b1a) 81.0 % by weight of n-butylacrylate as component B1A;
  - b1c) 2.0 % by weight of N-methylol methacrylamide as component B1C;
  - b1d) 1.0 % by weight of acrylic acid as component B1D;
  - and b1e1) 16 % by weight of acrylic nitrile as component B1E1 in combination with a fixative agent which is an isocyanurate based on HMDI which is dissolved in propylene carbonate.

The teachings of Marr et al. and Gordon et al. are addressed in the above 103 rejection, but fail to teach the specific fixative which is an isocyanurate based on HMDI which is dissolved in propylene carbonate. It is for this reason Laas et al. is joined.

Laas et al. teach water-dispersible polyisocyanate preparations are important additives for aqueous dispersion adhesives because they are resistant to heat and water (column 1, lines 30-35). The polyisocyanates are synthesized from diisocyanates

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including 1,4-bis-(isocyanatomethyl)-cyclohexane (HMDI) (column 5, line 17). Suitable solvents include 1,2-propylene carbonate (column 8, line 6). The products produced are clear and colorless and don't require the step of stirring with high shear forces to product a stable formulation (column 8, lines 13-25). The compositions are used in the treatment of textiles (column 9, lines 59-65).

Laas et al., Marrs et al. and Gordon et al. teach compositions for the treatment of fabrics. It would have been prima facie obvious at the time of the instant invention to combine the teachings of Laas et al., Marrs et al. and Gordon et al. to formulate a composition comprising which is an isocyanurate based on HMDI which is dissolved in propylene carbonate with a reasonable expectation of success. One of ordinary skill in the art would have been motivated to combine a fixative which is an isocyanurate based on HMDI which is dissolved in propylene carbonate because Laas et al. teach polyisocyanates of HMDI in propylene carbonate are known to be used in textiles to impart heat and water resistance and are clear and colorless.

### **Response to Arguments**

Applicant's arguments filed 11/09/2011 have been fully considered but they are not persuasive. Applicant argues that Laas does not cure the deficiencies of Marrs and Gordon discussed above. The Examiner maintained the position taken in the above response.

### ***Conclusion***

No claims allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE SULLIVAN whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun Sajjadi can be reached on (571) 272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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